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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,665	11/25/2003	Joseph T. Penaloza	D5288	5633

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EXAMINER	
HUYNH, KHOA D	
ART UNIT	**PAPER NUMBER**
3751	

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/721,665	PENALOZA ET AL.	
	Examiner	Art Unit	
	Khoa D. Huynh	3751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 11 is objected to because of the following informalities: the recitation "a plurality of interconnections" should read --said channels allowing interconnections--. Appropriate correction is suggested to clarify the claimed subject matter since claim 11 depends on claim 1 which already recited "channels interconnecting the depressions".

Claim 12 is objected to because of the following informalities: the recitation "a drain from" should read --said drain is located in--. Appropriate correction is suggested to clarify the claimed subject matter since claim 12 depends on claim 1 which already recited "a drain from one of the depressions".

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5, 6 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the floor" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 depends on claim 5 and is likewise indefinite.

Claim 15 recites the limitation "the dikes" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claims 16-18 depend on claim 15 and are likewise indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiggins et al. (4013190).

Regarding claim 1, the Wiggins et al. reference discloses a fuel tank (Fig. 1) for an aircraft (the aircraft can be construed as "a vehicle" for transporting people and goods). The tank includes a pan (20) having a perimeter wall (22,24,27,28) and dividing into a plurality of reservoirs (the compartments shown schematically in Fig. 1) defined by dikes (26,32) formed integrally with the pan. An outlet or a drain (at 38) is from one of the reservoirs. A plurality of channels (34,36) include at least one channel from every reservoir (Fig. 2) to at least on adjacent reservoir so that all of the reservoirs are interconnected and in fluid communication with each other. A floor section (about 29 in Fig. 1) is supported from the perimeter wall and the dikes providing the top of the fuel tank.

Regarding claim 2, the tank further comprises foam fillers (at 40,42) conforming to and disposed in each of the reservoirs.

Regarding claim 15 (as best understood), the Wiggins et al. reference discloses a substructure (Fig. 1) constructed as an integral part of the host structure such as an aircraft wing (the aircraft can be construed as "a vehicle" for

transporting people and goods). The substructure includes a floor section (the top surface 29 of the aircraft wing is construed as the floor section since it is capable of supporting the weight of a person, i.e. aviation mechanic standing on it), a support frame (22,24,27,28,26,32) disposed beneath and adjacent to the floor section (Fig. 1). The support frame includes a stamping having a raised, rectangular perimeter wall (22,24,27,28) with an upper edge in contact with the floor section and plurality of support ribs (26,32) within the raised, rectangular perimeter wall each of which are orthogonal with respect to a side thereof. A plurality of reservoirs (the compartments shown schematically in Fig. 1) defined by the ribs, the raised rectangular perimeter wall and a base (at 30) from which the raised rectangular perimeter wall and the ribs rise. A plurality of channels (34,36) though the ribs are interconnecting the reservoirs.

Regarding claim 16, the substructure also includes an outlet or a drain (at 38) is from one of the reservoirs and an inlet or return line (at 37) into one of the reservoirs.

Regarding claim 17, the substructure further comprises foam fillers (at 40,42) inserted in each of the reservoirs.

5. Claim 15 (as best understood) is rejected under 35 U.S.C. 102(b) as being anticipated by Chausson (2533431).

The Chausson. reference discloses a substructure (Fig. 1) constructed as an integral part of the host structure such as an aircraft wing (the aircraft can be construed as "a vehicle" for transporting people and goods). The substructure

includes a floor section (the top surface 24 of the aircraft wing is construed as the floor section since it is capable of supporting the weight of a person, i.e. aviation mechanic standing on it), a support frame (2-14) disposed beneath and adjacent to the floor section (Fig. 1). The support frame includes a stamping having a raised, rectangular perimeter wall (2) with an upper edge in contact with the floor section and plurality of support ribs (3-14) within the raised, rectangular perimeter wall each of which are orthogonal with respect to a side thereof. A plurality of reservoirs (the compartments shown schematically in Fig. 2) defined by the ribs, the raised rectangular perimeter wall and a base (at 1) from which the raised rectangular perimeter wall and the ribs rise. A plurality of channels (20) though the ribs are interconnecting the reservoirs.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chausson (2533431) in view of Wiggins et al. (4013190).

Regarding claim 1, the Chausson reference discloses a fuel tank (Fig. 1) for an aircraft (the aircraft can be construed as "a vehicle" for transporting people and goods). The tank includes a pan (A,B) having a perimeter wall (at 2) and dividing into a plurality of reservoirs (the compartments shown schematically in

Fig. 1) defined by dikes (3-14) formed integrally with the pan. A plurality of channels (at 20) include at least one channel from every reservoir (Fig. 2) to at least on adjacent reservoir so that all of the reservoirs are interconnected and in fluid communication with each other. A floor section (about 24 in Fig. 1) is supported from the perimeter wall and the dikes providing the top of the fuel tank.

The Chausson reference DIFFERS in that it does not specifically include a drain as claimed. Attention, however, is directed to the Wiggins et al. reference which discloses another fuel tank for an aircraft having a pan (20) including an outlet or a drain (at 38) from one of the reservoirs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Chausson reference by employing an outlet or a drain (if not already), in view of the teaching of Wiggins et al., to allow the fuel to flow out of the tank.

Regarding claim 2, the Chausson reference also DIFFERS in that it does not specifically include foam fillers as claimed. Attention, however, is also directed to the Wiggins et al. reference which discloses another fuel tank for an aircraft having a pan (20) including a plurality of reservoirs. The tank also includes foam fillers (at 40,42) conforming to and disposed in each of the reservoirs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Chausson reference by employing foam fillers in each of the reservoirs, in view of the teaching of

Wiggins et al., to provide a flame arresting structure to prevent the propagation of flame from compartment to compartment.

Regarding claim 3, as schematically shown in Figure 2 of the Chausson, there are brackets (at 15,17) fitted under the dikes for reinforcement.

Regarding claim 4, as schematically shown in Figures 1 and 3 of the Chausson, the floor section (at 24) including a plurality of mounting points (at 33) and the dikes (shown at 13) being located to support the mounting points.

Regarding claim 5, as schematically shown in Figures 1 and 3 of the Chausson, an opening (at least one of the opening formed in one of elements 37') is through the floor section and the pan.

Regarding claim 6, the Wiggins reference also discloses that the foam filler has a cellular structure (col. 6, lines 15-50).

8. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chausson (as discussed in paragraph 5) in view of Wiggins et al. (4013190).

Regarding claim 16, the Chausson reference DIFFERS in that it does not specifically include a drain and a return line as claimed. Attention, however, is directed to the Wiggins et al. reference which discloses another fuel tank for an aircraft having a pan (20) including an outlet or a drain (at 38) from one of the reservoirs and an inlet or return line (37) into one of the reservoirs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Chausson reference by employing an

outlet or a drain and an inlet or return line (if not already), in view of the teaching of Wiggins et al., to allow the fuel to flow out of and into the tank, respectively.

Regarding claim 17, the Chausson reference also DIFFERS in that it does not specifically include foam fillers as claimed. Attention, however, is also directed to the Wiggins et al. reference which discloses another fuel tank for an aircraft having a pan (20) including a plurality of reservoirs. The tank also includes foam fillers (at 40,42) conforming to and disposed in each of the reservoirs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Chausson reference by employing foam fillers in each of the reservoirs, in view of the teaching of Wiggins et al., to provide a flame arresting structure to prevent the propagation of flame from compartment to compartment.

Regarding claim 18, as schematically shown in Figure 2 of the Chausson, there are reinforcing brackets (at 15,17) welded under the stamping into the support ribs.

9. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manfred (EP0348383) in view of Chausson (2533431) and Wiggins et al. (4013190).

Regarding claims 7 and 11, the Manfred reference discloses a truck tractor. The tractor has a chassis or frame (5) with a cab (2) supported on the frame (Fig. 1). A fuel tank (about 4) is jointed to and forming the bottom of the cab. As schematically shown in the Figures, the fuel tank includes a cab floor (at

3) having a bottom surface forming the top of the fuel tank. A tank pan (4) is attached to the bottom surface of the cab floor (3).

The Manfred reference DIFFERS in that it does not specifically disclose that the tank pan includes depressions defined by dikes as claimed. Attention, however, is directed to the Chausson reference which discloses a multi-compartment fuel tank (Figs. 1 & 2) including a pan (A,B) having a perimeter wall (at 2) and dividing into a plurality of reservoirs or depressions (the compartments shown schematically in Fig. 1) defined by dikes (3-14,26-30). A plurality of channels (at 20) interconnects the depressions so that the depressions are in fluid communication with each other. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Manfred reference by employing the dikes, in view of the teaching of Chausson, in order to provide reinforcing members to make the tank stronger. Inherently, the dikes will sectionalize the tank into reservoirs or depressions.

The Manfred reference also DIFFERS in that it does not specifically include a drain as claimed. Attention, however, is directed to the Wiggins et al. reference which discloses a multi-compartment fuel tank (Fig. 1) including an outlet or a drain (38) to allow fuel to flow out. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Manfred reference by employing an outlet or a drain, in view of the teaching of Wiggins et al., to allow the fuel to flow out of the tank.

Regarding claim 8, as schematically shown in Fig. 2 of the Manfred, the tank includes a perimeter wall (the outer wall of tank 4) defining the outer rim of the pan. The perimeter wall has a flanged upper surface (the vertically extending portion adjacent element 7) for bonding to the undersurface of the cab floor. And, as schematically shown in Figs. 1 & 2 of Chausson, the dikes is provided to support the undersurface of the cab floor to provide rigidity to the floor, and the dikes are being arranged in a pattern to provide mounting points (at 33) for accessories, i.e. bolts in the cab.

Regarding claim 9, as schematically shown in Fig. 2 of Chausson, there are bracing members (15,17) disposed under the dikes.

Regarding claim 10, the Manfred reference also DIFFERS in that it does not specifically include foam fillers as claimed. Attention, however, is also directed to the Wiggins et al. reference which discloses another fuel tank for an aircraft having a pan (20) including a plurality of reservoirs. The tank also includes foam fillers (at 40,42) conforming to and disposed in each of the reservoirs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the modified Manfred reference by employing foam fillers in each of the reservoirs, in view of the teaching of Wiggins et al., to provide a flame arresting structure to prevent the propagation of flame from compartment to compartment.

Regarding claim 12, as schematically shown in Fig. 1 of Wiggins et al., the outlet or drain is from a lowest one of the depressions.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kleyn was cited to show a multi-compartment fuel tank.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoa D. Huynh whose telephone number is (571) 272-4888. The examiner can normally be reached on M-F (7:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khoa D. Huynh
Patent Examiner
Art Unit 3751

HK
05/24/2005